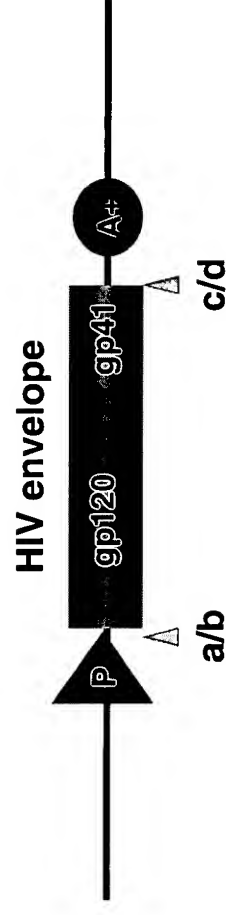
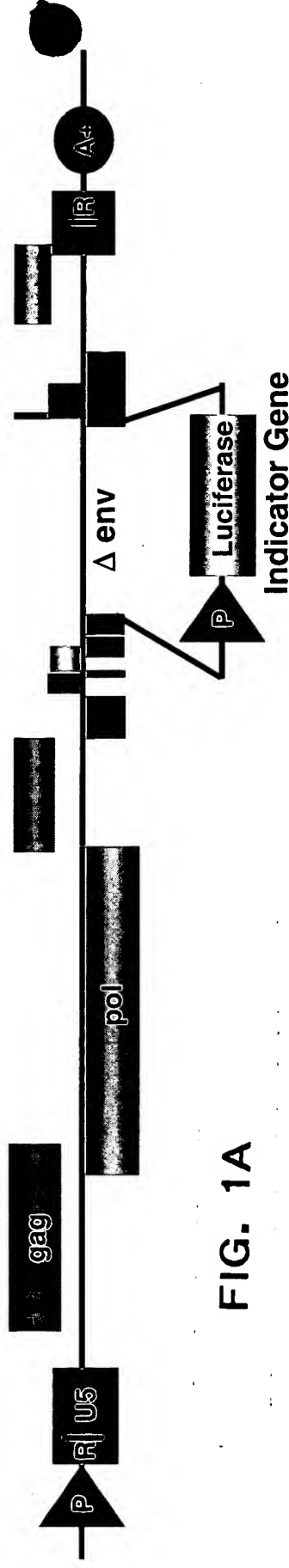


## Envelope Expression Vector: pHIVenv



### HIV-1 Expression Vector: pHIVlucΔU3



**FIG. 1A**

# PhenoSense™HIV: Cell Assay

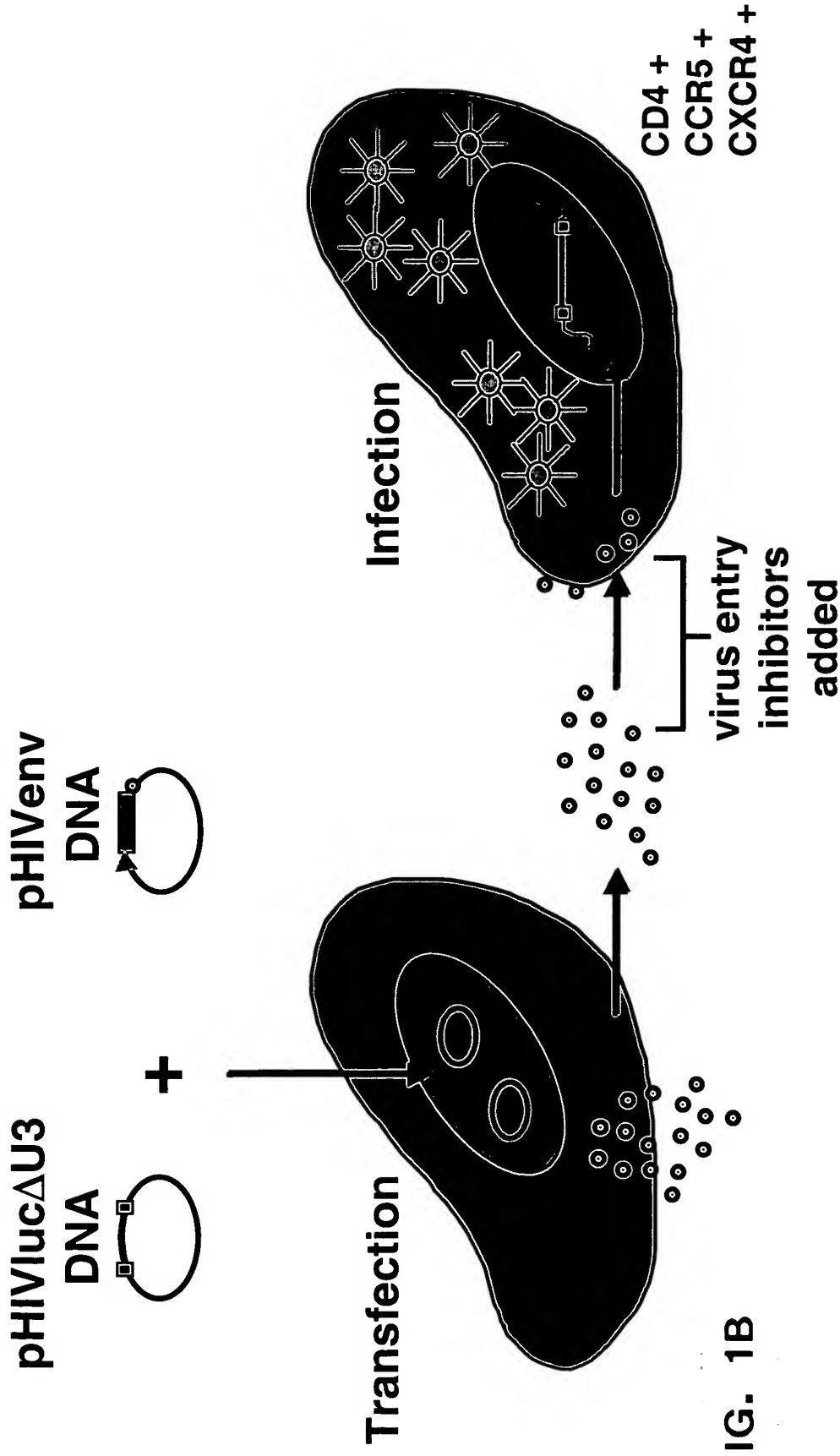
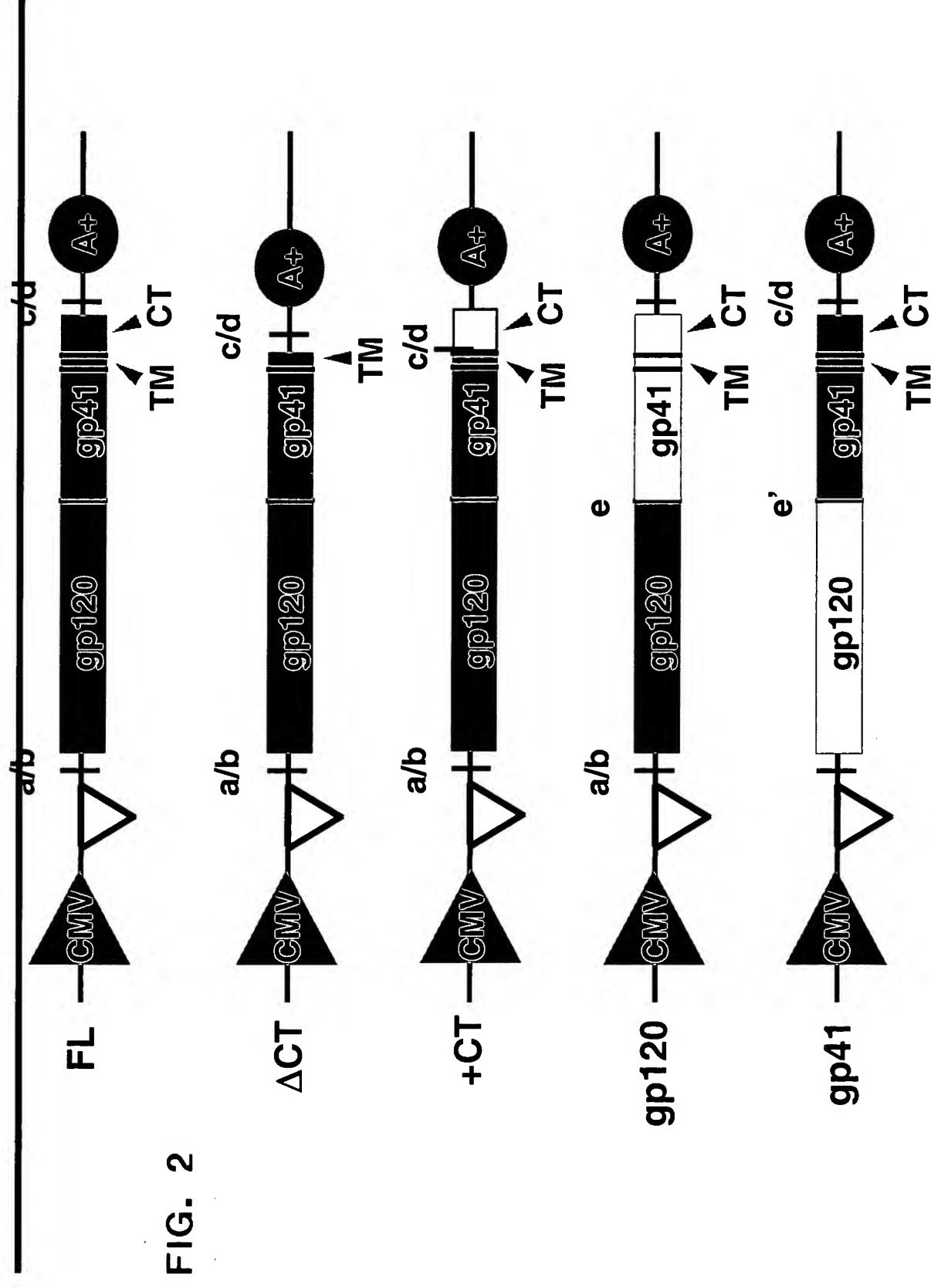


FIG. 1B

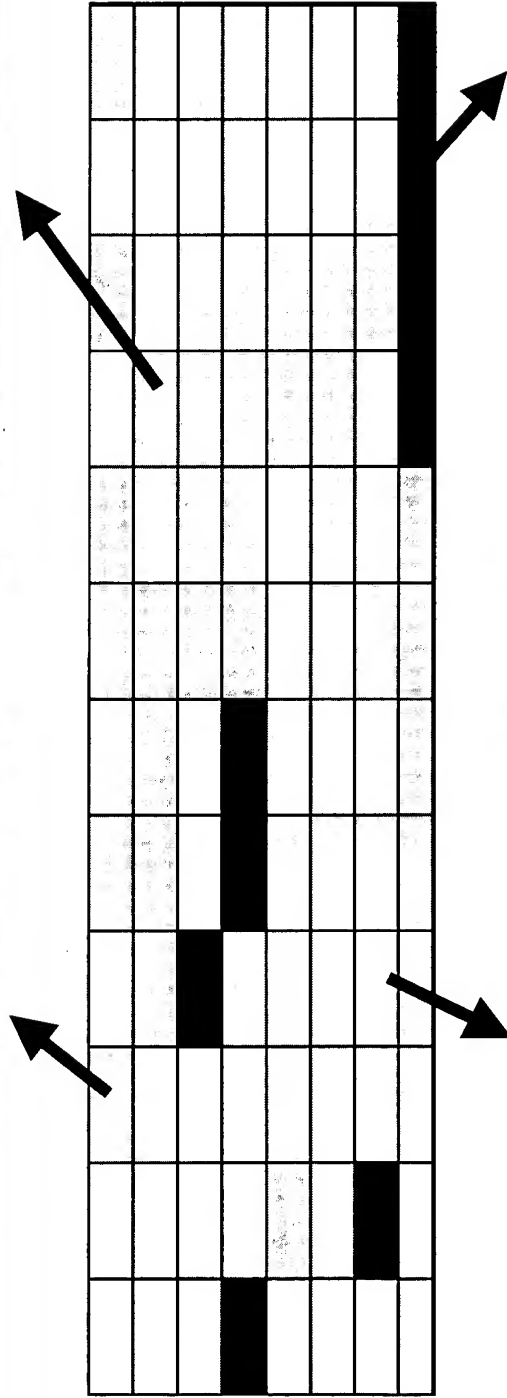
# HIV Envelope Expression Strategies



# Co-Receptor Tropism Assay Interpretation

3			
R5 cells	X4 cells	R5:X4	
no drug	34	26,471	0
R5 inhibitor		19,258	
X4 inhibitor		32	
%inhb by R5 inhibitor		27	
%inhb by X4 inhibitor		100	

21			
R5	X4	R5:X4	
no drug	67,389	72	936
R5 inhibitor	99		
X4 inhibitor	42,295		
%inhb by R5 inhibitor	100		
%inhb by X4 inhibitor	37		



CXCR4  
CCR5  
DUAL or MIXED  
active RLU limit: 100  
tropism ratio limit: 5

76			
R5	X4	R5:X4	
no drug	14,982	12,020	1
R5 inhibitor	111	10,839	
X4 inhibitor	8,580	3,384	
%inhb by R5 inhibitor	99	10	
%inhb by X4 inhibitor	43	72	

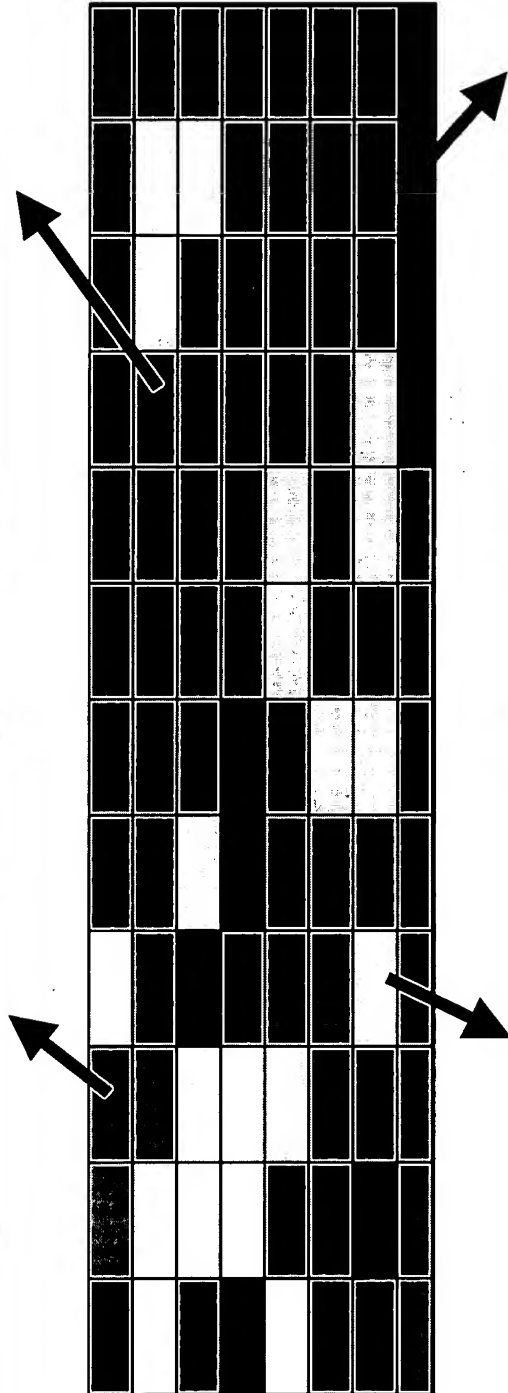
95			
R5	X4	R5:X4	
no drug			
R5 inhibitor	43		
X4 inhibitor	42		
%inhb by R5 inhibitor			
%inhb by X4 inhibitor			

FIG. 3A

# Co-Receptor Tropism Assay Interpretation

3			
R5 cells		X4 cells	R5:X4
no drug		34	26,471
R5 inhibitor			19,253
X4 inhibitor			32
%inhib by R5 inhibitor			27
%inhib by X4 inhibitor			100

21			
R5		X4	R5:X4
no drug		67,389	72
R5 inhibitor		99	
X4 inhibitor		42,295	
%inhib by R5 inhibitor		100	
%inhib by X4 inhibitor		37	



CXCR4  
CCR5  
DUAL or MIXED

active RLU limit: 100  
tropism ratio limit: 5

FIG. 3B

76			
R5		X4	R5:X4
no drug		14,982	12,020
R5 inhibitor		111	10,839
X4 inhibitor		8,580	3,384
%inhib by R5 inhibitor		99	10
%inhib by X4 inhibitor		43	72

95			
R5		X4	R5:X4
no drug		43	42
R5 inhibitor			
X4 inhibitor			
%inhib by R5 inhibitor			
%inhib by X4 inhibitor			

# Entry Inhibitor Susceptibility: Fusion Inhibitor

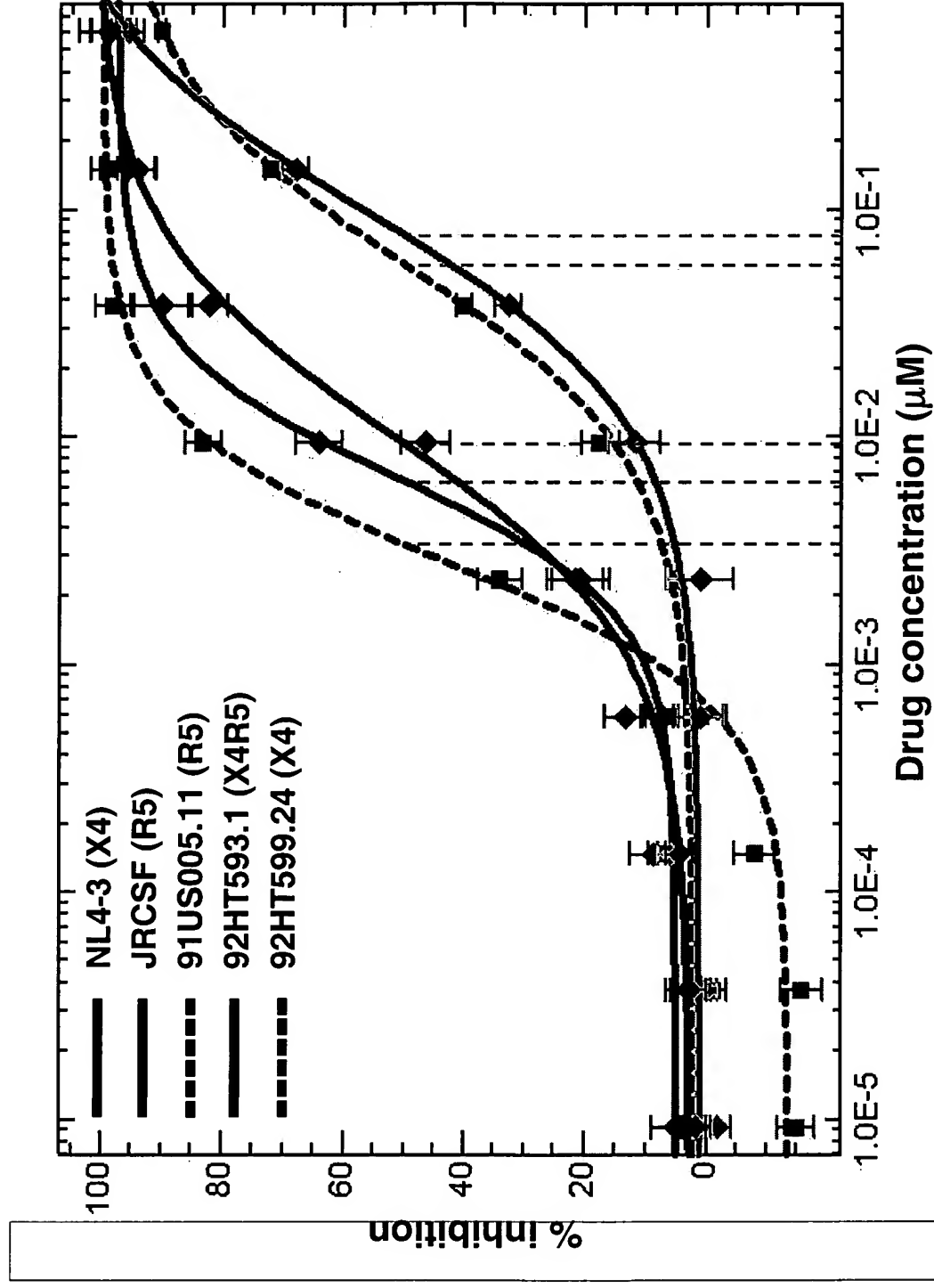


FIG. 4A

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# Reduced Susceptibility: Fusion Inhibitor

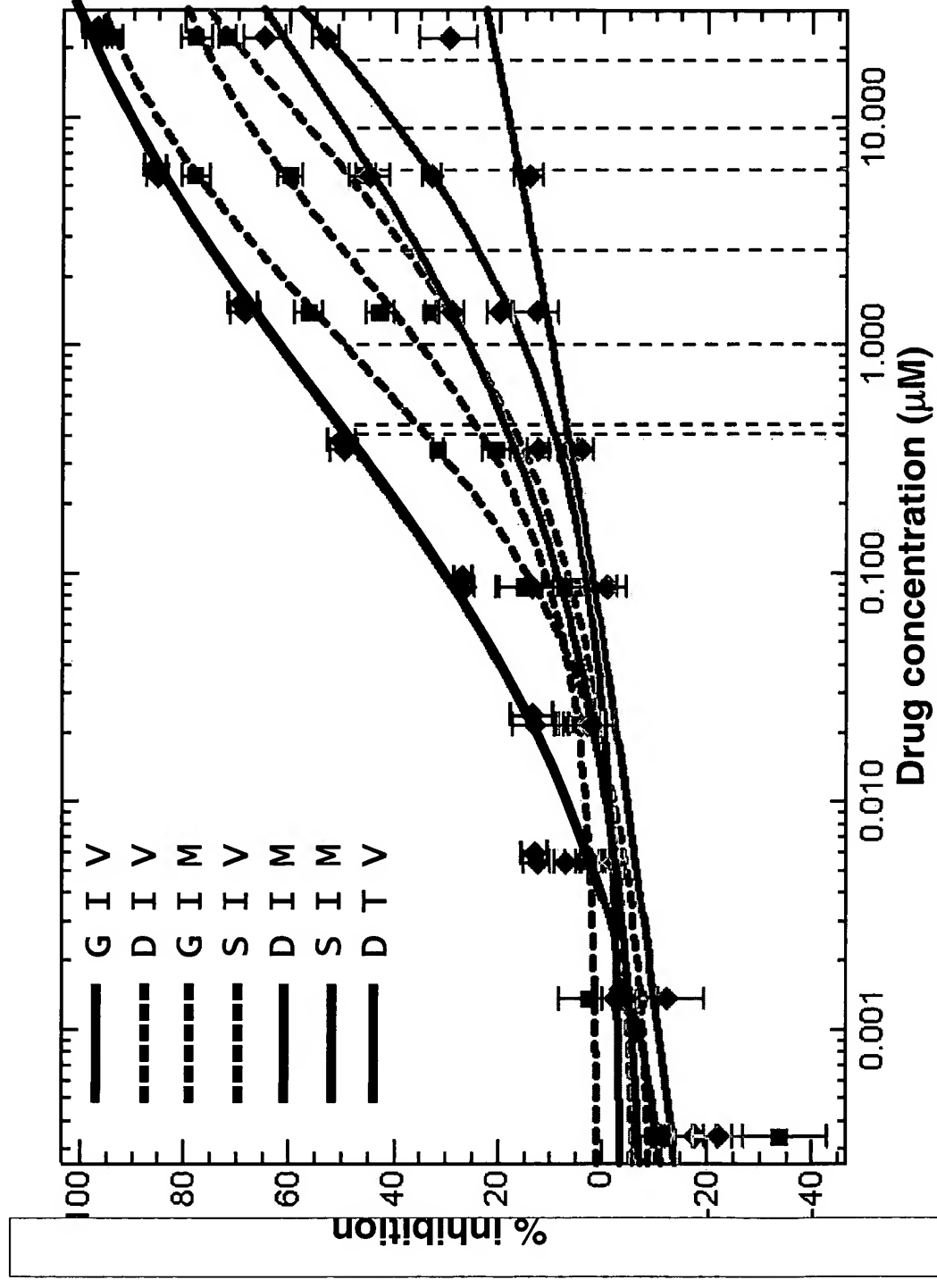
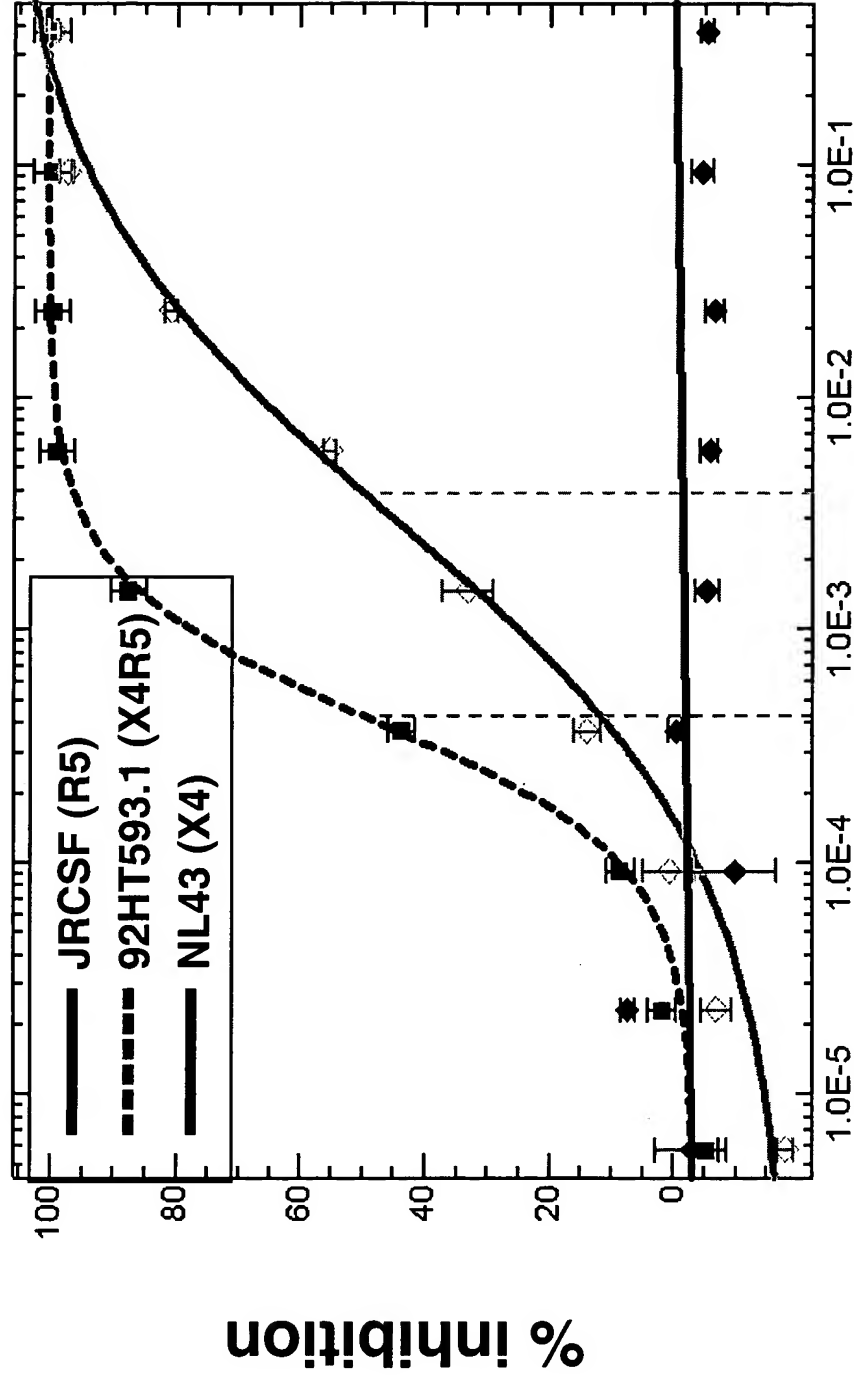


FIG. 4B

# *Entry Inhibitor Susceptibility: CCR5 Inhibitor*

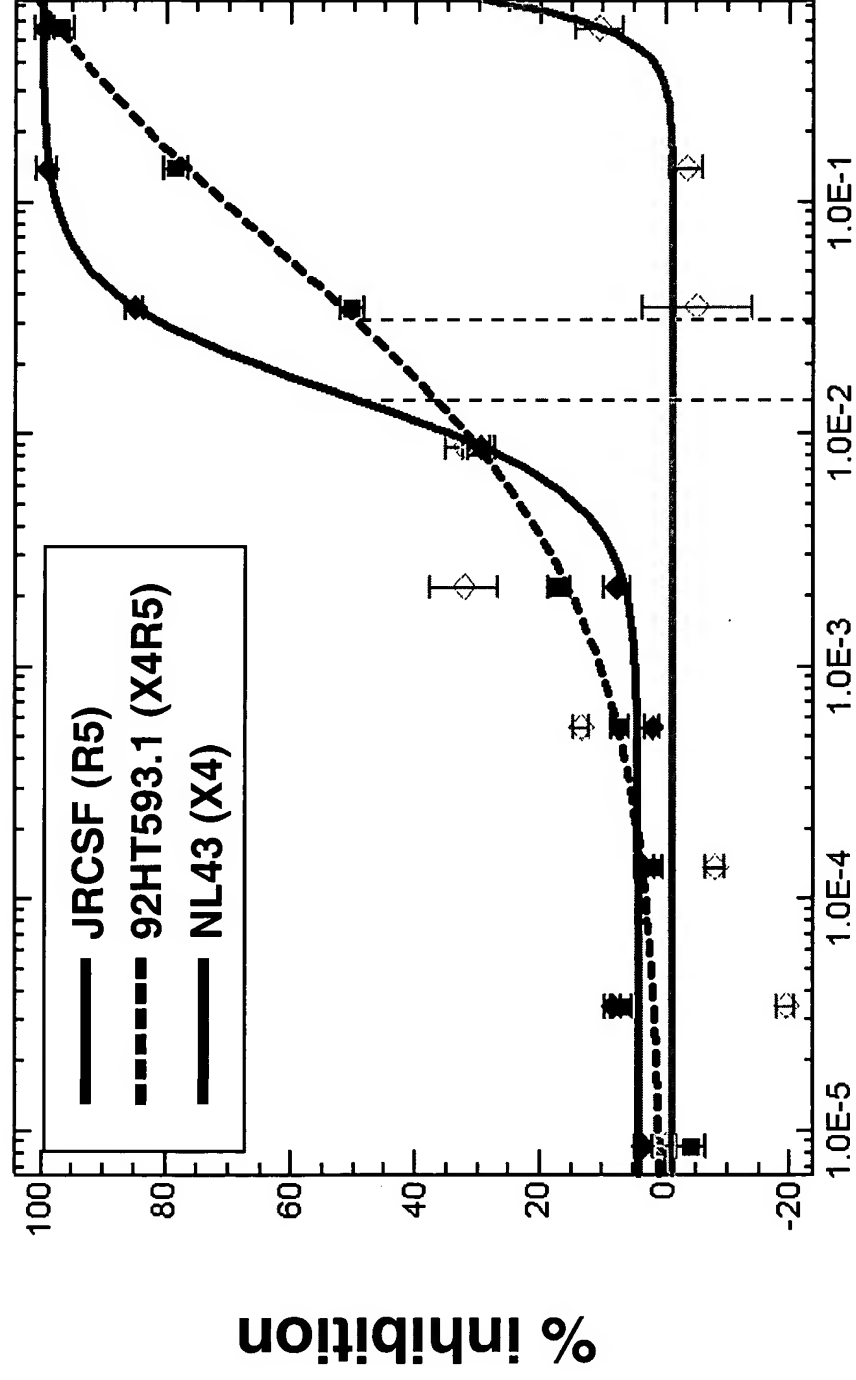


**Drug: R5 Inhibitor**  
**Cell: CD4/CCR5**

**FIG. 5A**



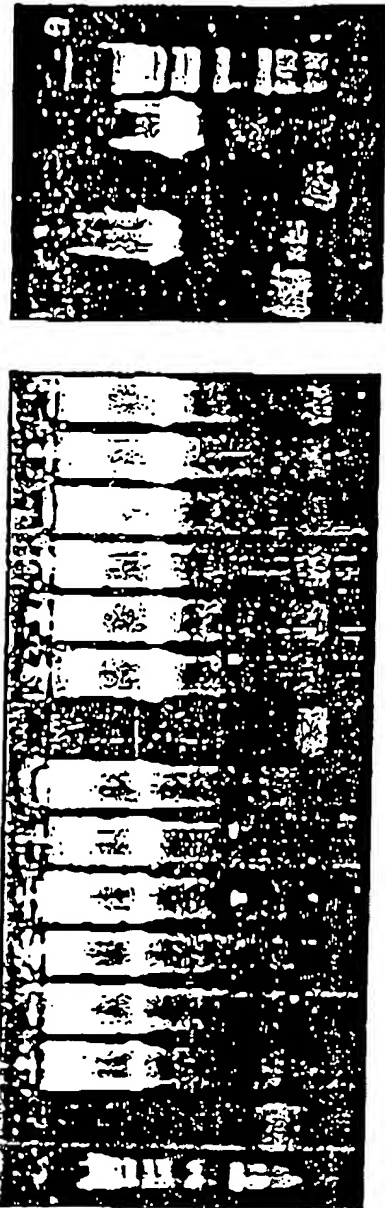
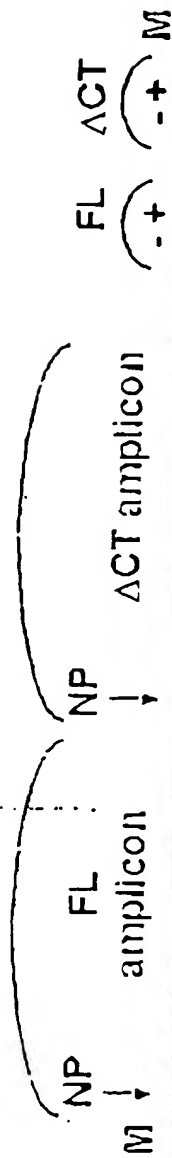
# Entry Inhibitor Susceptibility: CXCR4 Inhibitor



Drug: X4 Inhibitor  
Cell: CD4/CXCR4

FIG. 5B

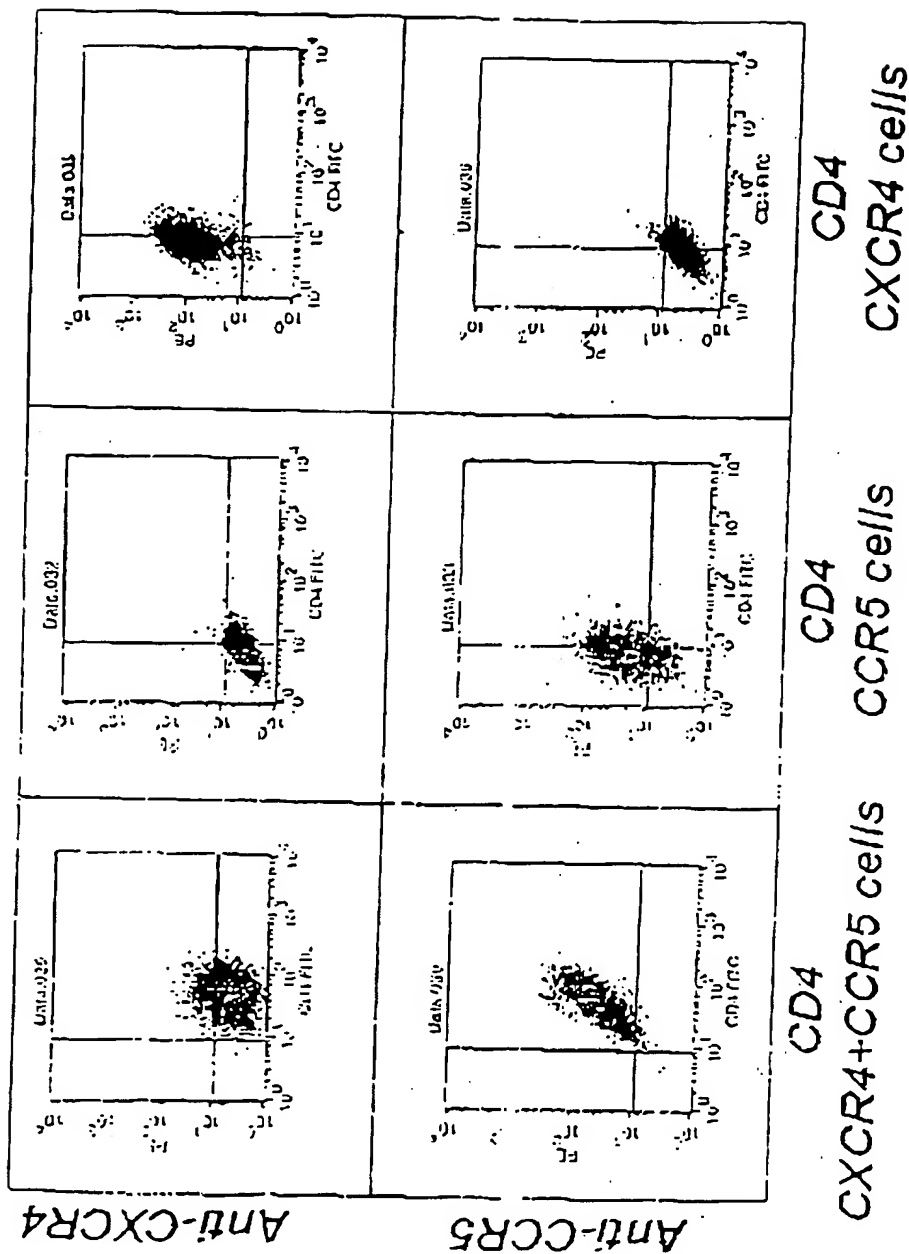
# Envelope Sequence Amplification



1. R5
  2. R5/X4
  3. R5
  4. R5/X4
  5. R5
  6. R5/X4
- NP: HIV  
negative plasma

Co-Receptor Tropism	# of isolates
X4	15
R5	24
X4/R5	15
Undefined	35
Envelope Subtype	# of isolate
Clade A	2
Clade B	76
Clade C	7
Clade D	1
Clade E	3

# Target Cell Receptor and Co-Receptor Expression



# Inhibition By Co-Receptor Antagonists

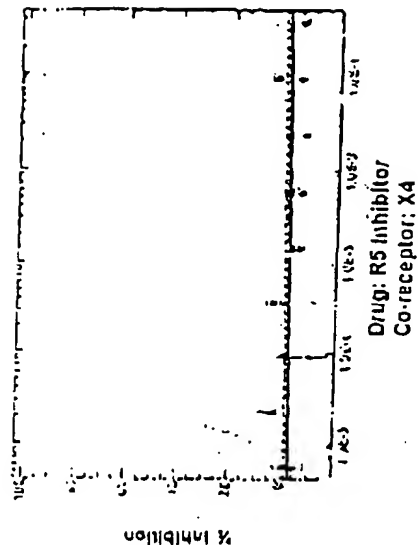
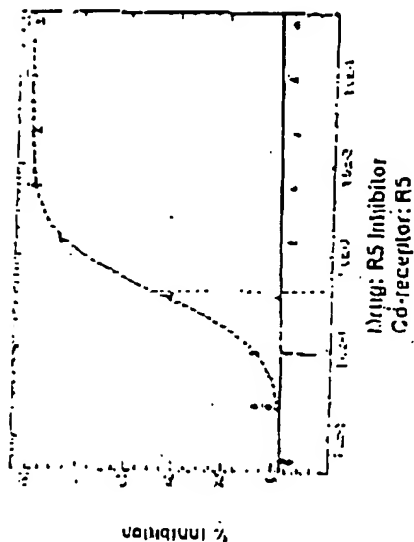
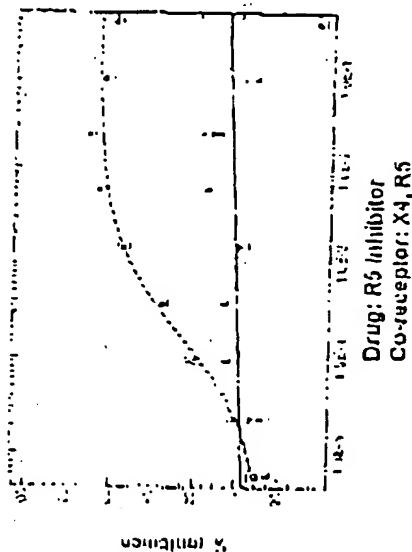
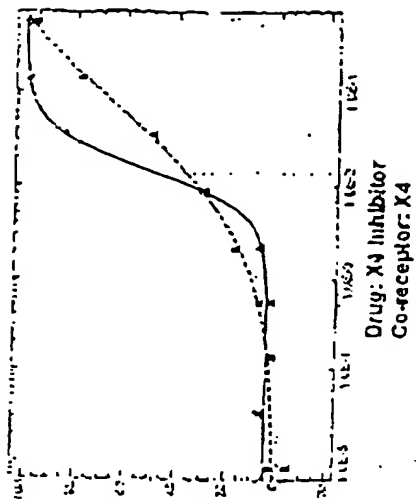
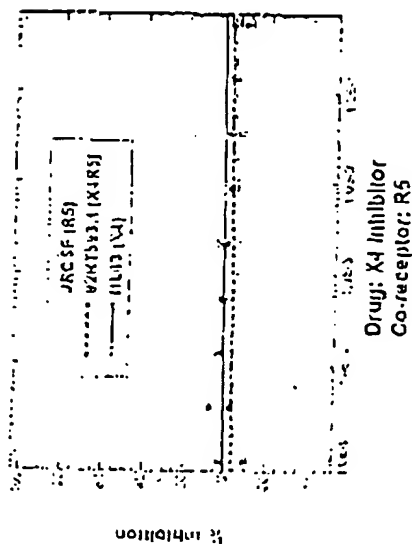
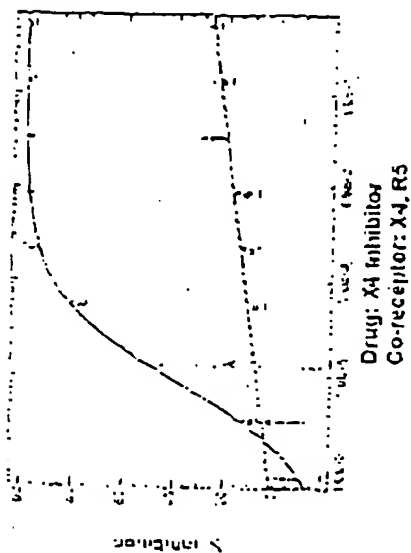
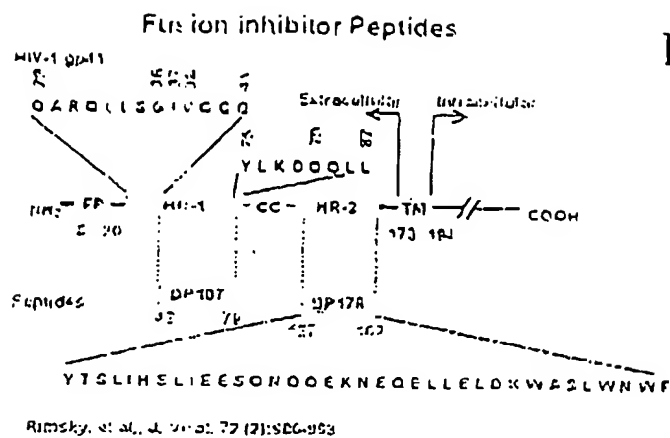


Figure 9



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**Figure X: Patient Virus v. Patient Antibody**

Virus Date	Plasma (Antibody) Date									
	9/2/99	11/29/99	2/29/00	5/31/00	8/30/00	11/22/00	2/14/01	5/30/01	9/11/01	
9/2/99	26	219	675	1403	2670	2089	2190	2363	2411	
11/29/99	29	179	1024	2151	3733	3152	2808	2953	3086	
2/29/00	27	35	78	358	1769	1939	2247	3112	4345	
5/31/00	36	67	82	200	795	1078	1371	2208	3375	
8/30/00	19	48	36	64	76	166	556	937	1407	
11/22/00	29	43	64	76	90	119	374	721	1234	
2/14/01	42	65	61	152	117	134	122	289	526	
5/30/01	41	66	82	84	85	113	78	107	296	
9/11/01	42	62	56	62	85	77	55	61	95	
Reference Virus										
NL43	17	138	294	956	1172	953	1584	1868	2143	
JRCSL	24	37	35	60	87	97	105	152	209	